

IN THE SPECIFICATION

Add a new paragraph at page 1, after the title and insert new section headings and subheading as follows:

CROSS REFERENCE TO RELATED APPLICATION

This application is a national phase application based on PCT/IT2003/000706, filed October 31, 2003, the content of which is incorporated herein by reference.

BACKGROUND OF THE INVENTION

Field of the Invention

Page 1, before line 7, add the following new subheading:

Description of the Related Art

Page 2, before line 9, add the following new section heading:

SUMMARY OF THE INVENTION

Page 3, lines 6-24, delete the three (3) paragraphs starting with "According to a first aspect..." and ending with "... claim 51 also forms a subject of the invention.", in their entirety and substitute new paragraphs therefor as follows:

According to a first aspect of the present invention, there is provided a method for determining the roughness of a rolling surface of a tyre (11), comprising the steps of:

providing a first signal (Sa) representative of the motion of at least one point (P) of the tyre during its rolling on the surface; and

processing the first signal for providing an output (OU_L) indicative of the roughness of said rolling surface of the tyre. In accordance with a second aspect of the

present invention, there is provided a method for controlling the behaviour of a vehicle to which at least one tyre is mounted, comprising the steps of:

determining an information relating to the roughness of a rolling surface of the tyre (11) in accordance with the foregoing method and making available the information relating to the roughness to a vehicle control system. In its preferred form of execution, said control system is an ABS (Anti Blocking System) system.

In accordance with a third aspect of the invention, there is provided a system for determining the roughness of a rolling surface of a tyre (11) to be mounted onto a vehicle, the system being operatively associable with the tyre and comprising:

a sensor device for providing a first signal (Sa) representative of the motion of at least one point (P) of the tyre during the rolling of said tyre on a surface having a respective roughness,

characterised in additionally comprising a processing stage (51, 2) of the first signal for generating an output (OU_L) indicative of the roughness of said tyre rolling surface.

In a fourth aspect of the invention, there is provided a tyre (11) for a vehicle, comprising a sensor device (3) operatively associated with the tyre for providing a first signal (Sa) representative of the motion of at least one point (P) of the tyre during the rolling of said tyre on a surface having a respective roughness,

characterised in that said sensor device comprises a processing stage (51) of the first signal for generating an output (OU_L) indicative of the roughness of said tyre rolling surface. In another aspect of the present invention, there is provided a

wheel comprising a supporting rim (12) and a tyre (11), as discussed above, associated with said supporting rim.

Page 3, before line 25, add the following new section heading:

BRIEF DESCRIPTION OF THE DRAWINGS

Page 5, before line 8, add the following new section heading:

DETAILED DESCRIPTION OF THE INVENTION